Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 159, 1 (2019)	30-Aug-2019

Q(β^-)=−7825 *18*; S(n)=8508 *20*; S(p)=2781 *23*; Q(α)=5643 *3* 2017Wa10

^{177}Pt Levels

Cross Reference (XREF) Flags

A ^{181}Hg α decay
B ^{149}Sm(^{32}S,4nγ)

E(level)†	Jπ‡	$T_{1/2}$	XREF	Comments
0.0@	5/2$^-$	10.0 s *4*	AB	%α=5.7 *5*; %ε+%β^+=94.3 *5* %α: From singles spectra in 1979Ha10. Others: 5.2 *18* (1982HeZM), 9.0 *8* (1970Ha18). %ε+%β^+ was not measured directly, but it was deduced from %α. Jπ: Favored α decay to the J^π=5/2$^-$ ground state of ^{173}Os. J^π systematics. Properties of the rotational band supports J^π=5/2$^-$. $T_{1/2}$: Weighted average of 11 s *2* (1970Ha18), 11 s *1* (1982Bo04) and 9.8 s *4* (1993Me13). Others: 6.6 s *10* (1966Si08) and 7.0 s *6* (1968De01). configuration: ν5/2[512] Nilsson configuration. Based on the established J^π, the observed in-band properties, such as alignment and g_K-g_R values. Eα= 5527 *6*, Iα= 88 *7*, Eα= 5435 *10*, Iα= 12 *1* (1979Ha10), Eα=5535 *20* (1982HeZM); Eα= 5525 *20*, Iα= 66 *6* and 5485 *20*, Iα= 34 *3* (1970Ha18); Eα= 5510 *10* (1966Si08); Eα= 5530 *25* (1968De01); Eα= 5510 *3* (1982Bo04).
81.2@ *4*	7/2$^-$		AB	Jπ: 81.2γ M1(+E2) to 5/2$^-$; band assignment.
94.8& *5*	7/2$^+$	8.3 ns *7*	B	Jπ: 94.8γ E1 to 5/2$^-$. $T_{1/2}$: From $\gamma\gamma$(t) spectrum produced by gating on the 94.8 keV transition (below the isomer) and several in-band transitions (above the isomer) in ^{149}Sm(^{32}S,4nγ) (1990Dr03). configuration: ν 7/2[633] ($i_{13/2}$) Nilsson configuration. Based on the established J^π, the observed in-band properties, such as large alignment, delayed first band crossing, g_K-g_R values and configuration systematics. The assignment is consistent with the measured transition strength for the E1 94.8 keV γ ray and systematics of similar transitions in the N=99 ^{175}Os and ^{173}W isotones. See also 1990Dr03.
140.5& *7*	9/2$^+$		B	Jπ: 45.7γ M1(+E2) to 7/2$^+$; band assignment.
147.5# *4*	1/2$^-$	2.2 μs *3*	AB	Jπ: 147.5γ to 5/2$^-$; favored α decay from the ^{181}Hg g.s. (J^π=1/2$^-$); J^π systematics; band properties. $T_{1/2}$: From $\alpha\gamma$(t) time-difference spectrum produced by gating on Eα=6006 keV and Eγ=147.7 keV in ^{181}Hg α-decay (1979Ha10). configuration: ν1/2[521] Nilsson configuration. Based on the established J^π, the observed in-band properties, such as large signature splitting (decoupled band) and rotational alignment.
197.4@ *4*	9/2$^-$		B	Jπ: 116.1γ to 7/2$^-$, 197.4γ to 5/2$^-$; band assignment.
209.7& *7*	11/2$^+$		B	Jπ: 69.9γ M1(+E2) to 9/2$^+$, 114.9 E2 to 7/2$^+$; band assignment.
214.0 *10*	(3/2$^-$)		AB	E(level),configuration: Probably a member of the K^π=1/2$^-$, ν1/2[521] band. Jπ: 214.0γ to 5/2$^-$.
239.9# *4*	5/2$^-$		AB	Jπ: 92.4γ to 1/2$^-$, 158.7γ to 7/2$^-$; band assignment.
264.7& *7*	13/2$^+$		B	Jπ: 55.2γ M1(+E2) to 11/2$^+$, 124.1γ to 9/2$^+$; band assignment.
336.3@ *5*	11/2$^-$		B	Jπ: 138.7γ M1+E2 to 9/2$^-$, 255.1γ to 7/2$^-$; band assignment.
430.4# *6*	9/2$^-$		B	Jπ: 190.5γ to 5/2$^-$; band assignment.
440.9& *8*	15/2$^+$		B	Jπ: 176.2γ (M1+E2) to 13/2$^+$, 231.1γ to 11/2$^+$; band assignment.

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Adopted Levels, Gammas (continued)

^{177}Pt Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
491.8[@] *5*	13/2⁻	B	Jπ: 155.6γ M1+E2 to 11/2⁻, 294.5γ E2 to 9/2⁻; band assignment.
531.9[&] *8*	17/2⁺	B	Jπ: 90.9γ to 15/2⁺, 267.3γ to 13/2⁺; band assignment.
666.7[@] *6*	15/2⁻	B	Jπ: 175.0γ (M1+E2) to 13/2⁻, 330.3γ E2 to 11/2⁻; band assignment.
697.8[#] *8*	13/2⁻	B	Jπ: 267.4γ to 9/2⁻; band assignment.
778.0[&] *8*	19/2⁺	B	Jπ: 246.0γ to 17/2⁺, 337.0γ E2 to 15/2⁺; band assignment.
855.5[@] *6*	17/2⁻	B	Jπ: 188.7γ (M1+E2) to 15/2⁻, 363.7γ E2 to 13/2⁻; band assignment.
902.0[&] *9*	21/2⁺	B	Jπ: 370.2γ E2 to 17/2⁺, 124.1γ to 19/2⁺; band assignment.
1031.9[#] *10*	17/2⁻	B	Jπ: 334.1γ E2 to 13/2⁻; band assignment.
1060.2[@] *7*	19/2⁻	B	Jπ: 204.7γ (M1+E2) to 17/2⁻, 393.6γ (E2) to 15/2⁻; band assignment.
1199.8[&] *9*	23/2⁺	B	Jπ: 298.0γ (M1+E2) to 21/2⁺, 421.6γ to 19/2⁺; band assignment.
1277.5[@] *7*	21/2⁻	B	Jπ: 217.4γ (M1+E2) to 19/2⁻, 422.0γ to 17/2⁻; band assignment.
1348.2[&] *9*	25/2⁺	B	Jπ: 148.4γ to 23/2⁺, 446.2γ to 21/2⁺; band assignment.
1424.8[#] *11*	21/2⁻	B	Jπ: 392.9γ (E2) to 17/2⁻; band assignment.
1508.9[@] *7*	23/2⁻	B	Jπ: 231.2γ to 21/2⁻, 422.0γ (E2) to 19/2⁻; band assignment.
1695.9[&] *9*	27/2⁺	B	Jπ: 348.1γ (M1+E2) to 25/2⁺, 496.1γ to 23/2⁺; band assignment.
1750.3[@] *8*	25/2⁻	B	Jπ: 241.0γ to 23/2⁻, 473.0γ (E2) to 21/2⁻; band assignment.
1863.0[&] *10*	29/2⁺	B	Jπ: 167.4γ (M1+E2) to 27/2⁺, 514.5γ E2 to 25/2⁺; band assignment.
1869.3[#] *12*	25/2⁻	B	Jπ: 444.5γ to 21/2⁻; band assignment.
2005.8[@] *9*	27/2⁻	B	Jπ: 255γ to 25/2⁻, 497.1γ (E2) to 23/2⁻; band assignment.
2258.9[&] *11*	31/2⁺	B	Jπ: 396.2γ to 29/2⁺, 563.0γ E2 to 27/2⁺; band assignment.
2267.8[@] *9*	29/2⁻	B	Jπ: 260.2γ to 27/2⁻, 517.5γ (E2) to 25/2⁻; band assignment.
2359.0[#] *13*	29/2⁻	B	Jπ: 489.7γ (E2) to 25/2⁻; band assignment.
2441.9[&] *11*	33/2⁺	B	Jπ: 578.9γ to 29/2⁺; band assignment.
2544.7[@] *10*	31/2⁻	B	Jπ: 278.0γ to 29/2⁻, 538.9γ (E2) to 27/2⁻; band assignment.
2824.6[@] *11*	33/2⁻	B	Jπ: 281γ to 31/2⁻, 556.8γ (E2) to 29/2⁻; band assignment.
2883.8[&] *12*	35/2⁺	B	Jπ: 624.9γ to 31/2⁺; band assignment.
2889.0[#] *14*	33/2⁻	B	Jπ: 530.0γ (E2) to 27/2⁻; band assignment.
3081.5[&] *12*	37/2⁺	B	Jπ: 639.6γ to 33/2⁺; band assignment.
3117.4[@] *11*	35/2⁻	B	Jπ: 292.0γ to 33/2⁻, 572.7γ to 31/2⁻; band assignment.
3416.4[@] *12*	(37/2⁻)	B	Jπ: 300.0γ to 35/2⁻, 591.8γ to 33/2⁻; band assignment.
3458.9[#] *15*	37/2⁻	B	Jπ: 569.9γ (E2) to 33/2⁻; band assignment.
3566.7[&] *13*	(39/2⁺)	B	Jπ: 682.9γ to 35/2⁺; band assignment.
3721.0[@] *12*	(39/2⁻)	B	Jπ: 603.6γ to 33/2⁻; band assignment.
3777.5[&] *13*	(41/2⁺)	B	Jπ: 696.0γ to 37/2⁺; band assignment.
4034.7[@] *13*	(41/2⁻)	B	Jπ: 618.3γ to (37/2⁻); band assignment.
4065.9[#] *16*	(41/2⁻)	B	Jπ: 607.0γ to 37/2⁻; band assignment.
4353.0[@] *13*	(43/2⁻)	B	Jπ: 632.0γ to (39/2⁻); band assignment.
4524.5[&] *14*	(45/2⁺)	B	Jπ: 747.0γ to (41/2⁺); band assignment.
4683.7[@] *14*	(45/2⁻)	B	Jπ: 649.0γ to (41/2⁻); band assignment.

[†] From a least-squares fit to Eγ.
[‡] From ^{149}Sm(^{32}S,4nγ) (1990Dr03), based on the deduced γ-ray transition multipolarities, unless otherwise stated.
[#] Band(A): $K^{\pi}=1/2^{-}$, ν1/2[521] band.

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Adopted Levels, Gammas (continued)

^{177}Pt Levels (continued)

@ Band(B): $K^\pi=5/2^-$, $\nu 5/2[512]$ band.
& Band(C): $K^\pi=7/2^+$, $\nu 7/2[633]$ band.

$\gamma(^{177}Pt)$

The quoted δ values in the Comments section are deduced from the branching ratios and the rotational model, and by assuming pure K.

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.‡	α@	Comments
81.2	$7/2^-$	81.2 *5*	100	0.0	$5/2^-$	M1(+E2)	12.0 *3*	α(K)=9.87 *22*; α(L)=1.67 *4*; α(M)=0.386 *9* α(N)=0.0955 *22*; α(O)=0.0172 *4*; α(P)=0.00116 *3* Mult.: From α(exp) in ^{149}Sm(^{32}S,4nγ) (1990Dr03).
94.8	$7/2^+$	94.8 *5*	100	0.0	$5/2^-$	E1	0.466 *9*	α(K)=0.374 *8*; α(L)=0.0708 *15*; α(M)=0.0165 *4* α(N)=0.00399 *8*; α(O)=0.000669 *14*; α(P)=2.94×10^{-5} *6* B(E1)(W.u.)=2.07×10^{-5} *18* Mult.: From α(exp) and A_2=− 0.20 *5*, A_4=− 0.05 *7* in ^{149}Sm(^{32}S,4nγ) (1990Dr03).
140.5	$9/2^+$	45.7 *5*	100	94.8	$7/2^+$	M1(+E2)	11.7 *5*	α(L)=9.0 *4*; α(M)=2.08 *8* α(N)=0.514 *19*; α(O)=0.092 *4*; α(P)=0.00622 *23* Mult.: From α(exp) in ^{149}Sm(^{32}S,4nγ) (1990Dr03).
147.5	$1/2^-$	147.4# *5*	100	0.0	$5/2^-$	[E2]	1.066 *21*	B(E2)(W.u.)=0.030 *5* α(K)=0.355 *6*; α(L)=0.535 *11*; α(M)=0.138 *3* α(N)=0.0336 *7*; α(O)=0.00528 *11*; α(P)=3.39×10^{-5} *6*
197.4	$9/2^-$	116.1 *5*	100 *10*	81.2	$7/2^-$	[M1+E2]	4.35 *9*	α(K)=3.58 *7*; α(L)=0.593 *12*; α(M)=0.137 *3* α(N)=0.0340 *7*; α(O)=0.00611 *12*; α(P)=0.000411 *8* δ: δ=0.37 *4*, by assuming K=5/2.
		197.4 *5*	57 *11*	0.0	$5/2^-$	[E2]	0.376 *7*	α(K)=0.176 *3*; α(L)=0.151 *3*; α(M)=0.0385 *7* α(N)=0.00940 *17*; α(O)=0.00150 *3*; α(P)=1.68×10^{-5} *3*
209.7	$11/2^+$	69.9	100 *5*	140.5	$9/2^+$	M1(+E2)	3.36	α(L)=2.58 *4*; α(M)=0.597 *9* α(N)=0.1478 *21*; α(O)=0.0266 *4*; α(P)=0.00179 *3* Mult.: From α(exp) in ^{149}Sm(^{32}S,4nγ) (1990Dr03). δ: δ=0.34 *2* by assuming K=7/2.
		114.9 *5*	26.2 *24*	94.8	$7/2^+$	E2	2.79 *7*	α(K)=0.586 *10*; α(L)=1.65 *4*; α(M)=0.427 *11* α(N)=0.104 *3*; α(O)=0.0163 *4*; α(P)=6.18×10^{-5} *11* Mult.: From α(exp) in ^{149}Sm(^{32}S,4nγ) (1990Dr03).
214.0	$(3/2^-)$	214.0 *10*	100	0.0	$5/2^-$	[M1]	0.773 *15*	α(K)=0.637 *13*; α(L)=0.1047 *21*; α(M)=0.0242 *5* α(N)=0.00599 *12*; α(O)=0.001077 *21*; α(P)=7.27×10^{-5} *14*
239.9	$5/2^-$	92.4# *5*		147.5	$1/2^-$			

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Adopted Levels, Gammas (continued)

γ(^{177}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[@]	Comments
239.9	5/2$^-$	158.7 *5*		81.2	7/2$^-$			
		240.0 *5*		0.0	5/2$^-$			
264.7	13/2$^+$	55.2 *5*	83 *29*	209.7	11/2$^+$	M1(+E2)	6.70 *21*	α(L)=5.15 *16*; α(M)=1.19 *4* α(N)=0.295 *9*; α(O)=0.0530 *17*; α(P)=0.00357 *11* Mult.: From α(exp) in ^{149}Sm(^{32}S,4nγ) (1990Dr03). δ: δ=0.22 *5* by assuming K=7/2.
		124.1 *5*	100 *29*	140.5	9/2$^+$	[E2]	2.06 *5*	α(K)=0.510 *9*; α(L)=1.16 *3*; α(M)=0.300 *7* α(N)=0.0731 *17*; α(O)=0.0114 *3*; α(P)=5.12×10^{-5} *9*
336.3	11/2$^-$	138.7 *5*	64 *3*	197.4	9/2$^-$	M1+E2	2.62 *5*	α(K)=2.15 *4*; α(L)=0.357 *7*; α(M)=0.0824 *15* α(N)=0.0204 *4*; α(O)=0.00367 *7*; α(P)=0.000247 *5* Mult.: A$_2$=− 0.58 *8*, A$_4$= 0.01 *9*. δ: δ= 0.34 *2* by assuming K=5/2. Others: δ=− 0.35 *+14−25* from γ(θ).
		255.1 *5*	100 *10*	81.2	7/2$^-$	[E2]	0.1618 *25*	α(K)=0.0918 *14*; α(L)=0.0528 *9*; α(M)=0.01335 *22* α(N)=0.00327 *6*; α(O)=0.000527 *9*; α(P)=9.04×10^{-6} *14*
430.4	9/2$^-$	190.5 *5*	100	239.9	5/2$^-$	[E2]	0.425 *7*	α(K)=0.192 *3*; α(L)=0.175 *4*; α(M)=0.0448 *8* α(N)=0.01094 *20*; α(O)=0.00174 *4*; α(P)=1.83×10^{-5} *3*
440.9	15/2$^+$	176.2 *5*	90 *10*	264.7	13/2$^+$	(M1+E2)	1.331 *22*	α(K)=1.096 *18*; α(L)=0.181 *3*; α(M)=0.0418 *7* α(N)=0.01034 *17*; α(O)=0.00186 *3*; α(P)=0.0001254 *21* Mult.: A$_2$=− 0.54 *11*. δ: δ=− 0.79 *7* by assuming K=7/2.
		231.1 *5*	100 *5*	209.7	11/2$^+$	[E2]	0.222	α(K)=0.1179 *18*; α(L)=0.0785 *13*; α(M)=0.0199 *4* α(N)=0.00487 *8*; α(O)=0.000781 *13*; α(P)=1.146×10^{-5} *18*
491.8	13/2$^-$	155.6 *5*	52 *4*	336.3	11/2$^-$	M1+E2	1.89 *4*	α(K)=1.56 *3*; α(L)=0.257 *5*; α(M)=0.0594 *10* α(N)=0.01470 *25*; α(O)=0.00264 *5*; α(P)=0.000178 *3* Mult.: A$_2$=− 0.34 *10*, A$_4$= 0.30 *14*. δ: δ= 0.27 *1* by assuming K=5/2.
		294.5 *5*	100 *5*	197.4	9/2$^-$	E2	0.1041	α(K)=0.0640 *10*; α(L)=0.0303 *5*; α(M)=0.00761 *12* α(N)=0.00186 *3*; α(O)=0.000303 *5*; α(P)=6.43×10^{-6} *10*
531.9	17/2$^+$	90.9 *5*	5.8 *7*	440.9	15/2$^+$	[M1+E2]	8.76 *19*	α(K)=7.19 *16*; α(L)=1.20 *3*; α(M)=0.278 *6* α(N)=0.0688 *15*; α(O)=0.0124 *3*; α(P)=0.000833 *18* δ: δ= 0.28 *2* by assuming K=7/2.
		267.3 *5*	100 *10*	264.7	13/2$^+$	[E2]	0.1398 *22*	α(K)=0.0816 *12*; α(L)=0.0440 *7*; α(M)=0.01109 *18* α(N)=0.00271 *5*; α(O)=0.000439 *7*; α(P)=8.09×10^{-6} *12*
666.7	15/2$^-$	175.0 *5*	38 *6*	491.8	13/2$^-$	(M1+E2)	1.357 *22*	α(K)=1.118 *18*; α(L)=0.184 *3*; α(M)=0.0426 *7* α(N)=0.01054 *17*; α(O)=0.00190 *3*; α(P)=0.0001278 *21* δ: δ= 0.26 *3* by assuming K=5/2. Mult.: A$_2$=− 0.06 *20*.
		330.3 *5*	100 *13*	336.3	11/2$^-$	E2	0.0743	α(K)=0.0482 *7*; α(L)=0.0198 *3*; α(M)=0.00494 *8*

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Adopted Levels, Gammas (continued)

γ(^{177}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[@]	Comments
								α(N)=0.001210 *19*; α(O)=0.000198 *3*; α(P)=4.91×10^{-6} *7*
697.8	13/2$^-$	267.4 *5*	100	430.4	9/2$^-$	[E2]	0.1396 *22*	Mult.: A_2= 0.23 *9*, A_4=− 0.10 *10*. α(K)=0.0815 *12*; α(L)=0.0439 *7*; α(M)=0.01107 *18* α(N)=0.00271 *5*; α(O)=0.000438 *7*; α(P)=8.08×10^{-6} *12*
778.0	19/2$^+$	246.0 *5*	44 *3*	531.9	17/2$^+$	M1+E2	0.526	α(K)=0.434 *7*; α(L)=0.0710 *11*; α(M)=0.01641 *25* α(N)=0.00406 *7*; α(O)=0.000731 *11*; α(P)=4.94×10^{-5} *8* Mult.: A_2=− 0.70 *8*, A_4=− 0.07 *9*. δ: δ= 0.70 by assuming K=7/2.
		337.0 *5*	100 *11*	440.9	15/2$^+$	(E2)	0.0702	α(K)=0.0459 *7*; α(L)=0.0184 *3*; α(M)=0.00459 *7* α(N)=0.001124 *17*; α(O)=0.000185 *3*; α(P)=4.68×10^{-6} *7* Mult.: A_2= 0.46 *19*, A_4=− 0.22 *23*.
855.5	17/2$^-$	188.7 *5*	32 *4*	666.7	15/2$^-$	(M1+E2)	1.098 *18*	α(K)=0.905 *15*; α(L)=0.1490 *24*; α(M)=0.0344 *6* α(N)=0.00852 *14*; α(O)=0.001533 *25*; α(P)=0.0001034 *17* Mult.: A_2=− 0.46 *15*. δ: δ= 0.23 *1* by assuming K=5/2.
		363.7 *5*	100 *4*	491.8	13/2$^-$	E2	0.0567	α(K)=0.0381 *6*; α(L)=0.01405 *21*; α(M)=0.00348 *6* α(N)=0.000854 *13*; α(O)=0.0001410 *21*; α(P)=3.93×10^{-6} *6* Mult.: A_2= 0.31 *7*, A_4=− 0.01 *7*.
902.0	21/2$^+$	124.1 *5*	7.5 *9*	778.0	19/2$^+$	[M1+E2]	3.59 *7*	α(K)=2.96 *6*; α(L)=0.490 *9*; α(M)=0.1133 *21* α(N)=0.0280 *6*; α(O)=0.00504 *10*; α(P)=0.000340 *7* δ: δ= 0.18 *2* by assuming K=7/2.
		370.2 *5*	100.0 *13*	531.9	17/2$^+$	E2	0.0540	α(K)=0.0365 *6*; α(L)=0.01321 *20*; α(M)=0.00327 *5* α(N)=0.000802 *12*; α(O)=0.0001325 *20*; α(P)=3.77×10^{-6} *6* Mult.: A_2= 0.30 *3*, A_4=− 0.06 *4*.
1031.9	17/2$^-$	334.1 *5*	100	697.8	13/2$^-$	(E2)	0.0719	α(K)=0.0468 *7*; α(L)=0.0190 *3*; α(M)=0.00473 *8* α(N)=0.001161 *18*; α(O)=0.000190 *3*; α(P)=4.78×10^{-6} *7* Mult.: A_2= 0.14 *4*, A_4= 0.18 *6*.
1060.2	19/2$^-$	204.7 *5*	26.7 *19*	855.5	17/2$^-$	(M1+E2)	0.875 *14*	α(K)=0.721 *12*; α(L)=0.1186 *19*; α(M)=0.0274 *5* α(N)=0.00678 *11*; α(O)=0.001220 *19*; α(P)=8.23×10^{-5} *13* Mult.: A_2=− 0.30 *11*. δ: δ= 0.22 *2* by assuming K=5/2.
		393.6 *5*	100 *14*	666.7	15/2$^-$	(E2)	0.0457	α(K)=0.0316 *5*; α(L)=0.01070 *16*; α(M)=0.00264 *4* α(N)=0.000647 *10*; α(O)=0.0001075 *16*; α(P)=3.28×10^{-6} *5* Mult.: A_2= 0.17 *9*.
1199.8	23/2$^+$	298.0 *5*	30.4 *22*	902.0	21/2$^+$	(M1+E2)	0.311	α(K)=0.257 *4*; α(L)=0.0419 *7*; α(M)=0.00967 *15*

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Adopted Levels, Gammas (continued)

γ(^{177}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[@]	Comments
								α(N)=0.00239 *4*; α(O)=0.000431 *7*; α(P)=2.91×10^{-5} *5*
								Mult.: A_2=− 0.37 *11*.
								δ: δ= 0.59 *4* by assuming K=7/2.
1199.8	23/2$^+$	421.6 *5*	100 *6*	778.0	19/2$^+$	[E2]	0.0381	α(K)=0.0269 *4*; α(L)=0.00850 *13*; α(M)=0.00209 *3*
								α(N)=0.000512 *8*; α(O)=8.55×10^{-5} *13*; α(P)=2.80×10^{-6} *4*
1277.5	21/2$^-$	217.4 *5*	23.6 *24*	1060.2	19/2$^-$	(M1+E2)	0.740 *12*	α(K)=0.610 *10*; α(L)=0.1002 *16*; α(M)=0.0232 *4*
								α(N)=0.00573 *9*; α(O)=0.001031 *16*; α(P)=6.96×10^{-5} *11*
								Mult.: A_2=− 0.53 *13*.
								δ: δ= 0.20 *1* by assuming K=5/2. Others: δ=− 0.25 *+19−38* from γ(θ).
		422.0 *5*	100 *8*	855.5	17/2$^-$	[E2]	0.0380	α(K)=0.0268 *4*; α(L)=0.00847 *13*; α(M)=0.00208 *3*
								α(N)=0.000511 *8*; α(O)=8.52×10^{-5} *13*; α(P)=2.80×10^{-6} *4*
1348.2	25/2$^+$	148.4 *5*	5.2 *9*	1199.8	23/2$^+$	[M1+E2]	2.16 *4*	α(K)=1.78 *3*; α(L)=0.294 *5*; α(M)=0.0680 *12*
								α(N)=0.0168 *3*; α(O)=0.00303 *6*; α(P)=0.000204 *4*
								δ: δ= 0.17 *1* by assuming K=7/2.
		446.2 *5*	100 *6*	902.0	21/2$^+$	[E2]	0.0329	α(K)=0.0236 *4*; α(L)=0.00706 *11*; α(M)=0.00173 *3*
								α(N)=0.000424 *7*; α(O)=7.11×10^{-5} *11*; α(P)=2.47×10^{-6} *4*
1424.8	21/2$^-$	392.9 *5*	100	1031.9	17/2$^-$	(E2)	0.0459	α(K)=0.0317 *5*; α(L)=0.01076 *16*; α(M)=0.00265 *4*
								α(N)=0.000651 *10*; α(O)=0.0001081 *16*; α(P)=3.29×10^{-6} *5*
								Mult.: A_2= 0.3 *3*.
1508.9	23/2$^-$	231.2 *5*	20 *3*	1277.5	21/2$^-$	[M1+E2]	0.624 *10*	α(K)=0.514 *8*; α(L)=0.0844 *13*; α(M)=0.0195 *3*
								α(N)=0.00483 *8*; α(O)=0.000868 *14*; α(P)=5.86×10^{-5} *9*
								δ: δ= 0.20 *1* by assuming K=5/2.
		448.6 *5*	100 *3*	1060.2	19/2$^-$	(E2)	0.0325	α(K)=0.0233 *4*; α(L)=0.00694 *10*; α(M)=0.001698 *25*
								α(N)=0.000417 *6*; α(O)=6.99×10^{-5} *11*; α(P)=2.44×10^{-6} *4*
								Mult.: A_2= 0.34 *5*, A_4=− 0.08 *6*.
1695.9	27/2$^+$	348.1 *5*	17 *3*	1348.2	25/2$^+$	(M1+E2)	0.204	α(K)=0.1686 *25*; α(L)=0.0274 *4*; α(M)=0.00632 *10*
								α(N)=0.001565 *23*; α(O)=0.000282 *4*; α(P)=1.91×10^{-5} *3*
								Mult.: A_2= 0.17 *3*, A_4=− 0.02 *4*.
								δ: δ= 0.66 *9* by assuming K=7/2.
		496.1 *5*	100 *8*	1199.8	23/2$^+$	[E2]	0.0252	α(K)=0.0186 *3*; α(L)=0.00506 *8*; α(M)=0.001230 *18*
								α(N)=0.000302 *5*; α(O)=5.10×10^{-5} *8*; α(P)=1.96×10^{-6} *3*
1750.3	25/2$^-$	241.0 *5*	14.4 *14*	1508.9	23/2$^-$	[M1+E2]	0.556 *9*	α(K)=0.459 *7*; α(L)=0.0752 *12*; α(M)=0.0174 *3*
								α(N)=0.00430 *7*; α(O)=0.000774 *12*; α(P)=5.22×10^{-5} *8*
								δ: δ= 0.21 *2* by assuming K=5/2.

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Adopted Levels, Gammas (continued)

$\gamma(^{177}Pt)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[@]	Comments
1750.3	25/2$^-$	473.0 *5*	100 *10*	1277.5	21/2$^-$	(E2)	0.0284	α(K)=0.0207 *3*; α(L)=0.00587 *9*; α(M)=0.001430 *21* α(N)=0.000351 *5*; α(O)=5.91×10^{-5} *9*; α(P)=2.17×10^{-6} *3* Mult.: A_2= 0.18 *5*, A_4=− 0.24 *5*.
1863.0	29/2$^+$	167.4 *5*	2.5 *8*	1695.9	27/2$^+$	(M1+E2)	1.54 *3*	α(K)=1.266 *21*; α(L)=0.209 *4*; α(M)=0.0483 *8* α(N)=0.01195 *20*; α(O)=0.00215 *4*; α(P)=0.0001449 *24* Mult.: A_2=− 0.18 *25*. δ: δ= 0.20 *3* by assuming K=7/2.
		514.5 *5*	100 *4*	1348.2	25/2$^+$	E2	0.0231	α(K)=0.01715 *25*; α(L)=0.00453 *7*; α(M)=0.001098 *16* α(N)=0.000270 *4*; α(O)=4.57×10^{-5} *7*; α(P)=1.81×10^{-6} *3* Mult.: A_2= 0.19 *6*, A_4= 0.06 *6*.
1869.3	25/2$^-$	444.5 *5*	100	1424.8	21/2$^-$	[E2]	0.0332	α(K)=0.0238 *4*; α(L)=0.00715 *11*; α(M)=0.00175 *3* α(N)=0.000430 *7*; α(O)=7.20×10^{-5} *11*; α(P)=2.49×10^{-6} *4*
2005.8	27/2$^-$	255 *1*	<19	1750.3	25/2$^-$	[M1+E2]	0.476 *9*	α(K)=0.393 *7*; α(L)=0.0643 *12*; α(M)=0.0149 *3* α(N)=0.00368 *7*; α(O)=0.000662 *12*; α(P)=4.47×10^{-5} *8* δ: δ=0.17 *1* by assuming K=5/2.
		497.1 *5*	100 *7*	1508.9	23/2$^-$	(E2)	0.0251	α(K)=0.0185 *3*; α(L)=0.00503 *8*; α(M)=0.001222 *18* α(N)=0.000300 *5*; α(O)=5.07×10^{-5} *8*; α(P)=1.95×10^{-6} *3* Mult.: A_2= 0.45 *12*, A_4=− 0.14 *15*.
2258.9	31/2$^+$	396.2[&] *10*	25 *5*	1863.0	29/2$^+$	[M1+E2]	0.1443 *23*	α(K)=0.1193 *19*; α(L)=0.0193 *3*; α(M)=0.00446 *7* α(N)=0.001103 *18*; α(O)=0.000199 *3*; α(P)=1.346×10^{-5} *21* δ: δ= 0.43 *4* by assuming K=7/2.
		563.0 *5*	100 *4*	1695.9	27/2$^+$	E2	0.0186	α(K)=0.01410 *20*; α(L)=0.00347 *5*; α(M)=0.000836 *12* α(N)=0.000206 *3*; α(O)=3.51×10^{-5} *5*; α(P)=1.490×10^{-6} *21* Mult.: A_2= 0.25 *7*, A_4=− 0.30 *8*.
2267.8	29/2$^-$	260.2[&] *10*	16.8 *22*	2005.8	27/2$^-$	[M1+E2]	0.451 *8*	α(K)=0.372 *7*; α(L)=0.0608 *11*; α(M)=0.01405 *25* α(N)=0.00348 *7*; α(O)=0.000626 *11*; α(P)=4.23×10^{-5} *8* δ: δ=0.16 *1* by assuming K=5/2.
		517.5 *5*	100 *4*	1750.3	25/2$^-$	(E2)	0.0228	α(K)=0.01693 *24*; α(L)=0.00445 *7*; α(M)=0.001079 *16* α(N)=0.000265 *4*; α(O)=4.49×10^{-5} *7*; α(P)=1.79×10^{-6} *3* Mult.: A_2= 0.12 *10*.
2359.0	29/2$^-$	489.7 *5*	100	1869.3	25/2$^-$	(E2)	0.0261	α(K)=0.0191 *3*; α(L)=0.00527 *8*; α(M)=0.001281 *19* α(N)=0.000315 *5*; α(O)=5.31×10^{-5} *8*; α(P)=2.01×10^{-6} *3* Mult.: A_2= 0.29 *10*, A_4=− 0.03 *10*.

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Adopted Levels, Gammas (continued)

$\gamma(^{177}Pt)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[@]	Comments
2441.9	$33/2^+$	578.9 *5*	100	1863.0	$29/2^+$	[E2]	0.01748	α(K)=0.01328 *19*; α(L)=0.00320 *5*; α(M)=0.000771 *11* α(N)=0.000190 *3*; α(O)=3.24×10^{-5} *5*; α(P)=1.404×10^{-6} *20*
2544.7	$31/2^-$	278.0[&] *10*	23 *5*	2267.8	$29/2^-$	[M1+E2]	0.376 *7*	α(K)=0.310 *6*; α(L)=0.0507 *9*; α(M)=0.01170 *21* α(N)=0.00290 *5*; α(O)=0.000521 *9*; α(P)=3.52×10^{-5} *6* δ: δ=0.13 *1* by assuming K=5/2.
		538.9 *5*	100 *6*	2005.8	$27/2^-$	(E2)	0.0207	α(K)=0.01550 *22*; α(L)=0.00394 *6*; α(M)=0.000953 *14* α(N)=0.000234 *4*; α(O)=3.98×10^{-5} *6*; α(P)=1.636×10^{-6} *24* Mult.: A_2= 0.17 *5*, A_4=− 0.27 *8*.
2824.6	$33/2^-$	281.0[&] *10*	16.4 *17*	2544.7	$31/2^-$	[M1+E2]	0.365 *7*	α(K)=0.301 *6*; α(L)=0.0492 *9*; α(M)=0.01136 *20* α(N)=0.00281 *5*; α(O)=0.000506 *9*; α(P)=3.42×10^{-5} *6* δ: δ=0.14 *1* by assuming K=5/2.
		556.8 *5*	100 *4*	2267.8	$29/2^-$	(E2)	0.0191	α(K)=0.01444 *21*; α(L)=0.00358 *6*; α(M)=0.000864 *13* α(N)=0.000213 *3*; α(O)=3.62×10^{-5} *6*; α(P)=1.526×10^{-6} *22* Mult.: A_2= 0.38 *7*, A_4=− 0.06 *7*.
2883.8	$35/2^+$	624.9 *5*	100	2258.9	$31/2^+$	[E2]	0.01468	α(K)=0.01130 *16*; α(L)=0.00258 *4*; α(M)=0.000619 *9* α(N)=0.0001522 *22*; α(O)=2.61×10^{-5} *4*; α(P)=1.196×10^{-6} *17*
2889.0	$33/2^-$	530.0 *5*	100	2359.0	$29/2^-$	(E2)	0.0215	α(K)=0.01607 *23*; α(L)=0.00414 *6*; α(M)=0.001003 *15* α(N)=0.000247 *4*; α(O)=4.18×10^{-5} *6*; α(P)=1.696×10^{-6} *24* Mult.: A_2= 0.21 *18*.
3081.5	$37/2^+$	639.6 *5*	100	2441.9	$33/2^+$	[E2]	0.01394	α(K)=0.01076 *16*; α(L)=0.00242 *4*; α(M)=0.000580 *9* α(N)=0.0001426 *21*; α(O)=2.45×10^{-5} *4*; α(P)=1.140×10^{-6} *16*
3117.4	$35/2^-$	292.0[&] *10*	33 *7*	2824.6	$33/2^-$	[M1+E2]	0.329 *6*	α(K)=0.271 *5*; α(L)=0.0443 *8*; α(M)=0.01022 *18* α(N)=0.00253 *5*; α(O)=0.000455 *8*; α(P)=3.08×10^{-5} *6* δ: δ=0.10 *1* by assuming K=5/2.
		572.7 *5*	100 *11*	2544.7	$31/2^-$	[E2]	0.0179	α(K)=0.01359 *20*; α(L)=0.00330 *5*; α(M)=0.000795 *12* α(N)=0.000196 *3*; α(O)=3.34×10^{-5} *5*; α(P)=1.437×10^{-6} *21*
3416.4	$(37/2^-)$	300.0[&] *10*	35 *13*	3117.4	$35/2^-$	[M1+E2]	0.305 *6*	α(K)=0.252 *5*; α(L)=0.0411 *7*; α(M)=0.00949 *16* α(N)=0.00235 *4*; α(O)=0.000423 *7*; α(P)=2.86×10^{-5} *5* δ: δ=0.09 *2* by assuming K=5/2.
		591.8 *5*	100 *13*	2824.6	$33/2^-$	[E2]	0.01661	α(K)=0.01267 *18*; α(L)=0.00301 *5*; α(M)=0.000723 *11*

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Adopted Levels, Gammas (continued)

γ(^{177}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[@]	Comments
								α(N)=0.000178 *3*; α(O)=3.04×10^{-5} *5*; α(P)=1.341×10^{-6} *19*
3458.9	37/2$^-$	569.9 *5*	100	2889.0	33/2$^-$	(E2)	0.0181	α(K)=0.01373 *20*; α(L)=0.00335 *5*; α(M)=0.000807 *12* α(N)=0.000198 *3*; α(O)=3.38×10^{-5} *5*; α(P)=1.452×10^{-6} *21* Mult.: A_2= 0.16 *16*.
3566.7	(39/2$^+$)	682.9 *5*	100	2883.8	35/2$^+$	[E2]	0.01206	α(K)=0.00940 *14*; α(L)=0.00203 *3*; α(M)=0.000484 *7* α(N)=0.0001192 *17*; α(O)=2.06×10^{-5} *3*; α(P)=9.96×10^{-7} *14*
3721.0	(39/2$^-$)	603.6 *5*	100	3117.4	35/2$^-$	[E2]	0.01588	α(K)=0.01215 *18*; α(L)=0.00284 *4*; α(M)=0.000683 *10* α(N)=0.0001680 *24*; α(O)=2.88×10^{-5} *4*; α(P)=1.286×10^{-6} *19*
3777.5	(41/2$^+$)	696.0 *5*	100	3081.5	37/2$^+$	[E2]	0.01157	α(K)=0.00904 *13*; α(L)=0.00193 *3*; α(M)=0.000460 *7* α(N)=0.0001132 *16*; α(O)=1.96×10^{-5} *3*; α(P)=9.58×10^{-7} *14*
4034.7	(41/2$^-$)	618.3 *5*	100	3416.4	(37/2$^-$)	[E2]	0.01504	α(K)=0.01155 *17*; α(L)=0.00266 *4*; α(M)=0.000638 *9* α(N)=0.0001569 *23*; α(O)=2.69×10^{-5} *4*; α(P)=1.223×10^{-6} *18*
4065.9	(41/2$^-$)	607.0 *5*	100	3458.9	37/2$^-$	[E2]	0.01568	α(K)=0.01201 *17*; α(L)=0.00280 *4*; α(M)=0.000672 *10* α(N)=0.0001653 *24*; α(O)=2.83×10^{-5} *4*; α(P)=1.271×10^{-6} *18*
4353.0	(43/2$^-$)	632.0 *5*	100	3721.0	(39/2$^-$)	[E2]	0.01431	α(K)=0.01104 *16*; α(L)=0.00250 *4*; α(M)=0.000599 *9* α(N)=0.0001475 *21*; α(O)=2.53×10^{-5} *4*; α(P)=1.168×10^{-6} *17*
4524.5	(45/2$^+$)	747.0 *5*	100	3777.5	(41/2$^+$)	[E2]	0.00994	α(K)=0.00784 *11*; α(L)=0.001609 *23*; α(M)=0.000381 *6* α(N)=9.40×10^{-5} *14*; α(O)=1.630×10^{-5} *23*; α(P)=8.30×10^{-7} *12*
4683.7	(45/2$^-$)	649.0 *5*	100	4034.7	(41/2$^-$)	[E2]	0.01349	α(K)=0.01044 *15*; α(L)=0.00233 *4*; α(M)=0.000557 *8* α(N)=0.0001370 *20*; α(O)=2.36×10^{-5} *4*; α(P)=1.106×10^{-6} *16*

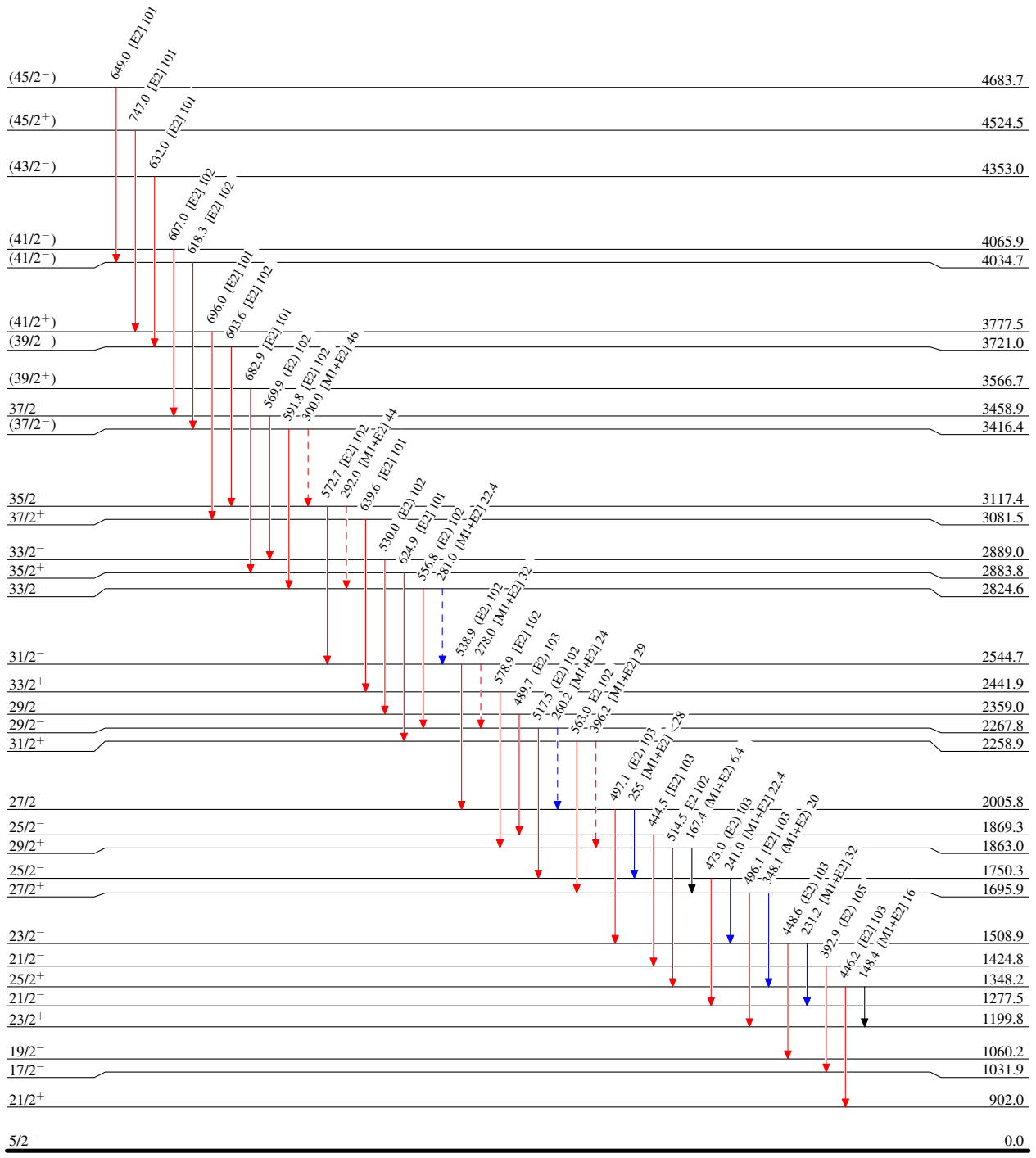
[†] From ^{149}Sm(^{32}S,4nγ) (1990Dr03), unless otherwise stated.
[‡] Determined from the measured angular distributions and total electron-conversion coefficients, deduced from intensity balance consideration for transitions with energies below 200 keV, in ^{149}Sm(^{32}S,4nγ) (1990Dr03). For band structures that have both cascade (ΔJ=1) and crossover (ΔJ=2) transitions, ΔJ=M1 or M1+E2 and ΔJ=E2 are assumed.
[#] From ^{181}Hg α-decay.
[@] Additional information 1.
[&] Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative $I_{(\gamma+ce)}$

Legend
- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)



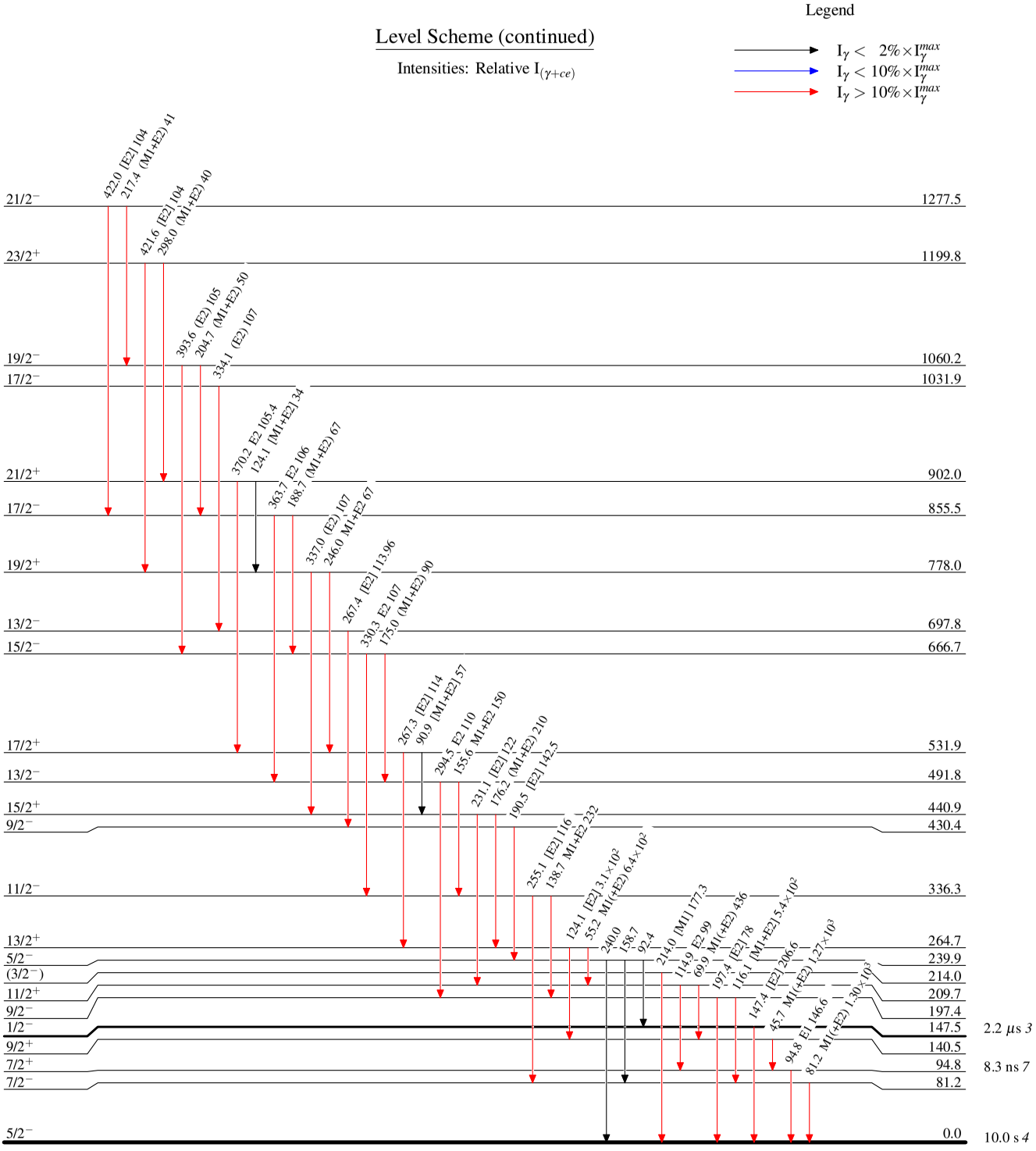
10.0 s *4*

$^{177}_{78}Pt_{99}$

Adopted Levels, Gammas

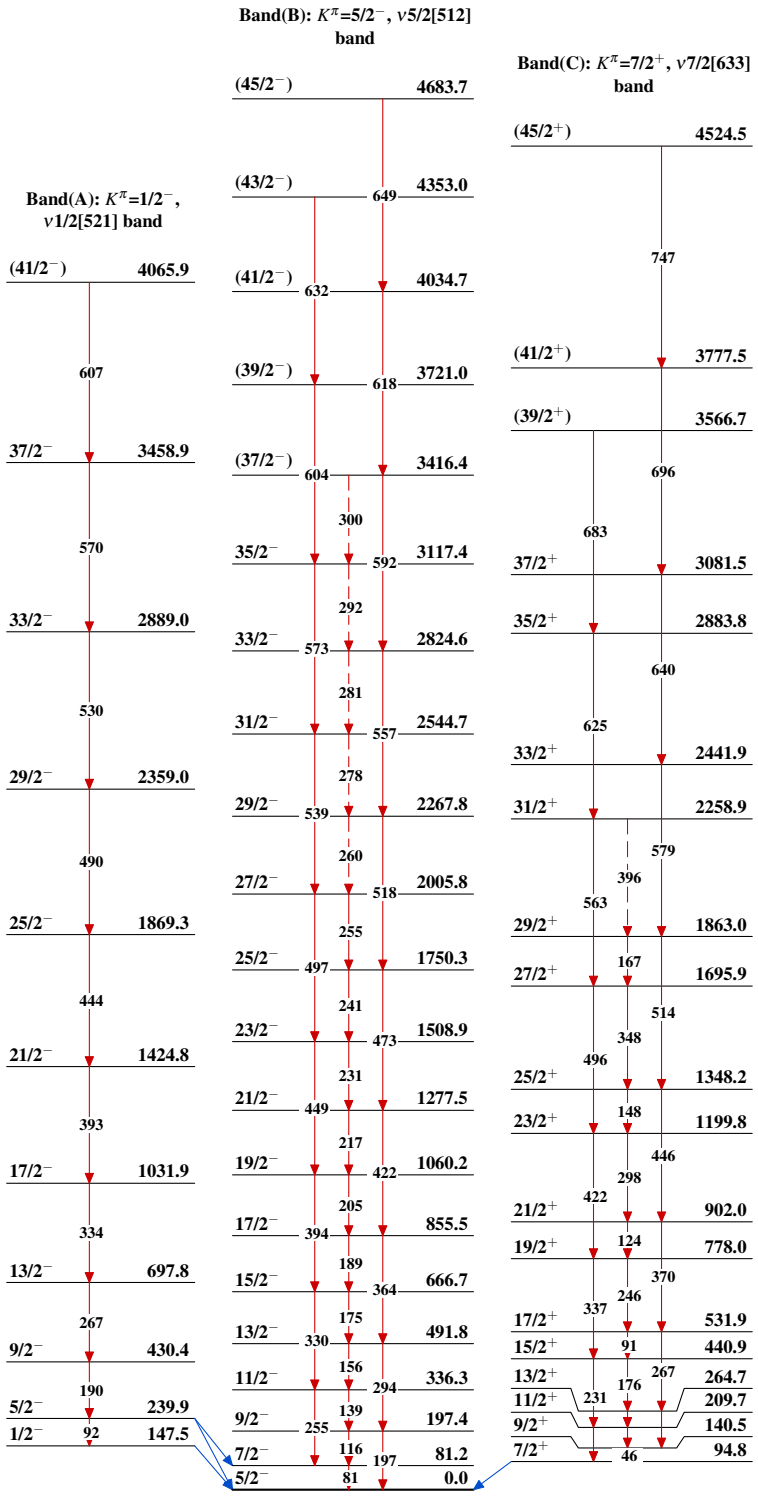
Level Scheme (continued)

Intensities: Relative $I_{(\gamma+ce)}$



$^{177}_{78}Pt_{99}$

Adopted Levels, Gammas



$^{177}_{78}Pt_{99}$